1600

1635

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/117,246B

DATE: 04/03/2002
TIME: 10:30:14

#19/K.T. 4/11 Raw Seq. Listing

Input Set : A:\50026.004001.SEQLIST.TXT
Output Set: N:\CRF3\04032002\I117246B.raw

<110> APPLICANT: Ludevid, Doloros
Torrent, Margarita
Alvarez, Inaki
Perez, Pascual
<120> TITLE OF INVENTION: Amino acid-enriched plant protein reserves, particularly lysine-enriched maize gamma-zein, and plants expressing such proteins
<130> FILE REFERENCE: 50062/004001
<140> CURRENT APPLICATION NUMBER: 09/117,246B
<141> CURRENT FILING DATE: 1998-12-03
<150> PRIOR APPLICATION NUMBER: PCT/FR97/00167
<151> PRIOR FILING DATE: 1997-01-28
<150> PRIOR APPLICATION NUMBER: FR96/01004
<151> PRIOR FILING DATE: 1996-01-29
<160> NUMBER OF SEQ ID NOS: 11
<170> SOFTWARE: FastSEQ for Windows Version 4.0
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<211> LENGTH: 44
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: based on Maize
<400> SEQUENCE: 1
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<211> LENGTH: 46
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: based on Maize
<400> SEQUENCE: 2
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<211> LENGTH: 17
<212> TYPE: PRT
<213> ORGANISM: Maize
<400> SEQUENCE: 3
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1 5 10 15
Pro
<210> SEQ ID NO: 4
<211> LENGTH: 28
<212> TYPE: PRT

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Input Set : A:\50026.004001.SEQLIST.TXT
Output Set: N:\CRF3\04032002\I117246B.raw

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68 <400> SEQUENCE: 4
69 Ile Glu Phe Lys Pro Lys Pro Lys Pro Lys Pro Lys Glu Phe Lys Pro
70  1               5                  10                  15
71 Lys Pro Lys Pro Lys Pro Lys Glu Phe Leu Gln Pro
72             20                  25
75 <210> SEQ ID NO: 5
76 <211> LENGTH: 20
77 <212> TYPE: PRT
78 <213> ORGANISM: Maize
80 <400> SEQUENCE: 5
81 Asp Gly Ile Asp Glu Phe Lys Pro Lys Pro Lys Pro Lys Pro Lys Glu
82  1               5                  10                  15
83 Phe Lys Leu Asp
84             20
87 <210> SEQ ID NO: 6
88 <211> LENGTH: 672
89 <212> TYPE: DNA
90 <213> ORGANISM: Maize
92 <220> FEATURE:
93 <221> NAME/KEY: CDS
94 <222> LOCATION: (1)...(672)
96 <400> SEQUENCE: 6
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98 Met Arg Val Leu Leu Val Ala Leu Ala Leu Leu Ala Leu Ala Ala Ser
99  1               5                  10                  15
101 gcc acc tcc acg cat aca agc ggc ggc tgc ggc tgc cag cca ccg ccg   96
102 Ala Thr Ser Thr His Thr Ser Gly Gly Cys Gly Cys Gln Pro Pro Pro
103             20                  25                  30
105 ccg gtt cat cta ccg ccg ccg gtg cat ctg cca cct ccg gtt cac ctg   144
106 Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu
107         35                  40                  45
109 cca cct ccg gtg cat ctc cca ccg ccg gtc cac ctg ccg ccg ccg gtc   192
110 Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val
111     50                  55                  60
113 cac ctg cca ccg ccg gtc cat gtg ccg ccg ccg gtt cat ctg ccg ccg   240
114 His Leu Pro Pro Pro Val His Val Pro Pro Pro Val His Leu Pro Pro
115 65                  70                  75                  80
117 cca cca tgc cac tac cct act caa ccg ccc cgg cct cag cct cat ccc   288
118 Pro Pro Cys His Tyr Pro Thr Gln Pro Pro Arg Pro Gln Pro His Pro
119                 85                  90                  95
121 cag cca cac cca tgc ccg tgc caa cag ccg cat cca agc ccg tgc cag   336
122 Gln Pro His Pro Cys Pro Cys Gln Gln Pro His Pro Ser Pro Cys Gln
123             100                 105                 110
125 ctg cag gga acc tgc ggc gtt ggc agc acc ccg atc ctg ggc cag tgc   384
126 Leu Gln Gly Thr Cys Gly Val Gly Ser Thr Pro Ile Leu Gly Gln Cys
127         115                 120                 125
129 gtc gag ttt ctg agg cat cag tgc agc ccg acg gcg acg ccc tac tgc   432
130 Val Glu Phe Leu Arg His Gln Cys Ser Pro Thr Ala Thr Pro Tyr Cys
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PATENT APPLICATION: US/09/117,246B TIME: 10:30:14

Input Set : A:\50026.004001.SEQLIST.TXT
Output Set: N:\CRF3\04032002\I117246B.raw

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131     130                 135                 140
133 tcg cct cag tgc cag tcg ttg cgg cag cag tgt tgc cag cag ctc agg   480
134 Ser Pro Gln Cys Gln Ser Leu Arg Gln Gln Cys Cys Gln Gln Leu Arg
135 145                 150                 155                 160
137 cag gtg gag ccg cag cac cgg tac cag gcg atc ttc ggc ttg gtc ctc   528
138 Gln Val Glu Pro Gln His Arg Tyr Gln Ala Ile Phe Gly Leu Val Leu
139                 165                 170                 175
141 cag tcc atc ctg cag cag cag ccg caa agc ggc cag gtc gcg ggg ctg   576
142 Gln Ser Ile Leu Gln Gln Gln Pro Gln Ser Gly Gln Val Ala Gly Leu
143             180                 185                 190
145 ttg gcg gcg cag ata gcg cag caa ctg acg gcg atg tgc ggc ctg cag   624
146 Leu Ala Ala Gln Ile Ala Gln Gln Leu Thr Ala Met Cys Gly Leu Gln
147         195                 200                 205
149 cag ccg act cca tgc ccc tac gct gct gcc ggc ggt gtc ccc cac tga   672
150 Gln Pro Thr Pro Cys Pro Tyr Ala Ala Ala Gly Gly Val Pro His  *
151     210                 215                 220
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156 <211> LENGTH: 223
157 <212> TYPE: PRT
158 <213> ORGANISM: Maize
160 <400> SEQUENCE: 7
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162  1               5                  10                  15
163 Ala Thr Ser Thr His Thr Ser Gly Gly Cys Gly Cys Gln Pro Pro Pro
164             20                  25                  30
165 Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu
166         35                  40                  45
167 Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val
168     50                  55                  60
169 His Leu Pro Pro Pro Val His Val Pro Pro Pro Val His Leu Pro Pro
170 65                  70                  75                  80
171 Pro Pro Cys His Tyr Pro Thr Gln Pro Pro Arg Pro Gln Pro His Pro
172                 85                  90                  95
173 Gln Pro His Pro Cys Pro Cys Gln Gln Pro His Pro Ser Pro Cys Gln
174             100                 105                 110
175 Leu Gln Gly Thr Cys Gly Val Gly Ser Thr Pro Ile Leu Gly Gln Cys
176         115                 120                 125
177 Val Glu Phe Leu Arg His Gln Cys Ser Pro Thr Ala Thr Pro Tyr Cys
178     130                 135                 140
179 Ser Pro Gln Cys Gln Ser Leu Arg Gln Gln Cys Cys Gln Gln Leu Arg
180 145                 150                 155                 160
181 Gln Val Glu Pro Gln His Arg Tyr Gln Ala Ile Phe Gly Leu Val Leu
182                 165                 170                 175
183 Gln Ser Ile Leu Gln Gln Gln Pro Gln Ser Gly Gln Val Ala Gly Leu
184             180                 185                 190
185 Leu Ala Ala Gln Ile Ala Gln Gln Leu Thr Ala Met Cys Gly Leu Gln
186         195                 200                 205
187 Gln Pro Thr Pro Cys Pro Tyr Ala Ala Ala Gly Gly Val Pro His
188     210                 215                 220
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PATENT APPLICATION: US/09/117,246B TIME: 10:30:14

Input Set : A:\50026.004001.SEQLIST.TXT
Output Set: N:\CRF3\04032002\I117246B.raw

<210> SEQ ID NO: 8
<211> LENGTH: 693
<212> TYPE: DNA
<213> ORGANISM: maize
<220> FEATURE:
<221> NAME/KEY: CDS
<222> LOCATION: (1)...(693)
<400> SEQUENCE: 8

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Met Arg Val Leu Leu Val Ala Leu Ala Leu Leu Ala Leu Ala Ala Ser
 1               5                  10                  15
gcc acc tcc acg cat aca agc ggc ggc tgc ggc tgc cag cca ccg ccg   96
Ala Thr Ser Thr His Thr Ser Gly Gly Cys Gly Cys Gln Pro Pro Pro
            20                  25                  30
ccg gtt cat cta ccg ccg ccg gtg cat ctg cca cct ccg gtt cac ctg   144
Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu
        35                  40                  45
cca cct ccg gtg cat ctc cca ccg ccg gtc cac ctg ccg ccg ccg gtc   192
Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val
    50                  55                  60
cac ctg cca ccg ccg gtc cat gtg ccg ccg ccg gtt cat ctg ccg ccg   240
His Leu Pro Pro Pro Val His Val Pro Pro Pro Val His Leu Pro Pro
65                  70                  75                  80
cca cca tgc cac tac cct act caa ccg ccc cgg atc gaa ttc aaa cca   288
Pro Pro Cys His Tyr Pro Thr Gln Pro Pro Arg Ile Glu Phe Lys Pro
                85                  90                  95
aag cca aag ccg aag cca aaa gaa ttc aaa cca aag cca aag ccg aag   336
Lys Pro Lys Pro Lys Pro Lys Glu Phe Lys Pro Lys Pro Lys Pro Lys
            100                 105                 110
cca aaa gaa ttc ctg cag ccc ctg cag gga acc tgc ggc gtt ggc agc   384
Pro Lys Glu Phe Leu Gln Pro Leu Gln Gly Thr Cys Gly Val Gly Ser
        115                 120                 125
acc ccg atc ctg ggc cag tgc gtc gag ttt ctg agg cat cag tgc agc   432
Thr Pro Ile Leu Gly Gln Cys Val Glu Phe Leu Arg His Gln Cys Ser
    130                 135                 140
ccg acg gcg acg ccc tac tgc tcg cct cag tgc cag tcg ttg cgg cag   480
Pro Thr Ala Thr Pro Tyr Cys Ser Pro Gln Cys Gln Ser Leu Arg Gln
145                 150                 155                 160
cag tgt tgc cag cag ctc agg cag gtg gag ccg cag cac cgg tac cag   528
Gln Cys Cys Gln Gln Leu Arg Gln Val Glu Pro Gln His Arg Tyr Gln
                165                 170                 175
gcg atc ttc ggc ttg gtc ctc cag tcc atc ctg cag cag cag ccg caa   576
Ala Ile Phe Gly Leu Val Leu Gln Ser Ile Leu Gln Gln Gln Pro Gln
            180                 185                 190
agc ggc cag gtc gcg ggg ctg ttg gcg gcg cag ata gcg cag caa ctg   624
Ser Gly Gln Val Ala Gly Leu Leu Ala Ala Gln Ile Ala Gln Gln Leu
        195                 200                 205
acg gcg atg tgc ggc ctg cag cag ccg act cca tgc ccc tac gct gct   672
Thr Ala Met Cys Gly Leu Gln Gln Pro Thr Pro Cys Pro Tyr Ala Ala
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PATENT APPLICATION: US/09/117,246B TIME: 10:30:14

Input Set : A:\50026.004001.SEQLIST.TXT
Output Set: N:\CRF3\04032002\I117246B.raw

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255     210                 215                 220
257 gcc ggc ggt gtc ccc cac tga                                         693
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259 225                 230
262 <210> SEQ ID NO: 9
263 <211> LENGTH: 230
264 <212> TYPE: PRT
265 <213> ORGANISM: maize
267 <400> SEQUENCE: 9
268 Met Arg Val Leu Leu Val Ala Leu Ala Leu Leu Ala Leu Ala Ala Ser
269  1               5                  10                  15
270 Ala Thr Ser Thr His Thr Ser Gly Gly Cys Gly Cys Gln Pro Pro Pro
271             20                  25                  30
272 Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu
273         35                  40                  45
274 Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val
275     50                  55                  60
276 His Leu Pro Pro Pro Val His Val Pro Pro Pro Val His Leu Pro Pro
277 65                  70                  75                  80
278 Pro Pro Cys His Tyr Pro Thr Gln Pro Pro Arg Ile Glu Phe Lys Pro
279                 85                  90                  95
280 Lys Pro Lys Pro Lys Pro Lys Glu Phe Lys Pro Lys Pro Lys Pro Lys
281             100                 105                 110
282 Pro Lys Glu Phe Leu Gln Pro Leu Gln Gly Thr Cys Gly Val Gly Ser
283         115                 120                 125
284 Thr Pro Ile Leu Gly Gln Cys Val Glu Phe Leu Arg His Gln Cys Ser
285     130                 135                 140
286 Pro Thr Ala Thr Pro Tyr Cys Ser Pro Gln Cys Gln Ser Leu Arg Gln
287 145                 150                 155                 160
288 Gln Cys Cys Gln Gln Leu Arg Gln Val Glu Pro Gln His Arg Tyr Gln
289                 165                 170                 175
290 Ala Ile Phe Gly Leu Val Leu Gln Ser Ile Leu Gln Gln Gln Pro Gln
291             180                 185                 190
292 Ser Gly Gln Val Ala Gly Leu Leu Ala Ala Gln Ile Ala Gln Gln Leu
293         195                 200                 205
294 Thr Ala Met Cys Gly Leu Gln Gln Pro Thr Pro Cys Pro Tyr Ala Ala
295     210                 215                 220
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297 225                 230
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301 <211> LENGTH: 723
302 <212> TYPE: DNA
303 <213> ORGANISM: Maize
305 <220> FEATURE:
306 <221> NAME/KEY: CDS
307 <222> LOCATION: (1)...(723)
309 <400> SEQUENCE: 10
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311 Met Arg Val Leu Leu Val Ala Leu Ala Leu Leu Ala Leu Ala Ala Ser
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VERIFICATION SUMMARY DATE: 04/03/2002
PATENT APPLICATION: US/09/117,246B TIME: 10:30:15

Input Set : A:\50026.004001.SEQLIST.TXT
Output Set: N:\CRF3\04032002\I117246B.raw